

SHEYKIN, A.Ye., prof., doktor tekhn. nauk

Special cements for hydraulic engineering concrete. Trudy MTT  
no.191:85-109 '64.

Strength of cement stone during prolonged heating at a tempera-  
ture of 155°C. Ibid.:110-118

Charge of particles of cement in aqueous suspensions. Ibid.:  
152-153 (MIRA 18:6)

SHEYKIN, A.Ye., doktor tekhn. nauk, prof.; YAKUB, T.Yu., inzh.

Physicochemical nature of the expansion of nonshrinking and  
expanding cements during hardening. Trudy MIIT no.191:5-62  
'64. (MIRA 18:6)

SHEYKIN, A.Ye., prof., doktor tekhn. nauk; OLEYNIKOVA, N.I., kand. tekhn. nauk

Effect of warm moist processing and the fineness of the grinding  
of the cement on the structure and characteristics of the cement  
stone. Trudy MIIT no.191:63-84 '64. (MIRA 18:6)

SHEVYKIN, A.Ye., doktor tekhn. nauk, prof.

[Outline of lectures on individual parts of the course  
"New materials in industry"] Konspekt lektsii po otdel'-  
nym razdelam kursa "Novye materialy v tekhnike." Mo-  
skva, Mosk. in-t inzhenerov zhel-dor. transp., 1963. 90 p.  
(MIRA 18:5)

SHEYKIN, G.Yu., kand.tekhn.nauk; SUKHORUCHKIN, I.A., kand.tekhn.nauk  
GORBUNOVA, Ye.N., mladshiy nauchnyy sotrudnik; SURIN, V.A.,  
mladshiy nauchnyy sotrudnik

Automatic distribution of water by closed stationary conduits.  
Gidr.i mel. 12 no.7:1-12 J1 '60. (MIRA 13:7)  
(Irrigation canals and flumes)

SHEYKIN, I., elektroslesar'.

Let's follow the best examples. Mast.ugl. 4 no.11:12 H '55.  
(Electricity in mining)(Coal mines and mining) (MLRA 9:2)

SHEYKIN, I.V.; DERYUGIN, B.A.

Determination of heat saturation during the summer period for  
the calculation of depths of thawing. Trudy Gos.inst. po proek.  
mor. por. i sudorem. pred. no.6:29-34 '59. (MIRA 14:3)  
(Frozen ground)  
(Thawing)

SHEYKIN, I. M. (Dotsent), AL'TMARK, A. M., VORONINA, E. A., and ROZENBLIT, Ya. A.

Analiz Effektivnosti Aktivnykh Metodov Lecheniya Zatyazhnykh Form Shizofrenii

p. 368 V sb Aktual'nyy Problemy Nevropatologii i Psikhiiatrii. Kuybyshev, 1957

Iz Gor'kovskoy Psikhonevrologicheskoy Bol'niy



SHEYKIN, I.V.

Estimating the probable degree hour sums of air in calculating the  
seasonal thawing depth of ground. Mat. k osn. uch. o merz. zon.  
zem. kory no.7:150-156 '61. (MIRA 14:7)  
(Frozen ground)

SHEYKIN, I.V.

Conference on heat measurements in cryology. Pochvovedenie  
no.12:117-118 D '61. (MIRA 16:8)  
(Frozen ground) (Temperature--Measurement)

ACC NR: AT6028813

(N)

SOURCE CODE: UR/3222/65/000/008/0129/0134

AUTHOR: Sheykin, I. V. (Engineer); Zaytseva, O. B. (Engineer)

ORG: none

TITLE: Automatic program-controlled wave recorder

SOURCE: Moscow. Gosudarstvennyy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut morskogo transporta. Trudy, no. 8(14), 1965. Volnovyye issledovaniya; inzhenernyye izyskaniya (Wave studies; engineering research), 129-134

TOPIC TAGS: measuring instrument, liquid level instrument, hydraulic engineering, ocean dynamics, automatic wave recorder, ocean wave height, *OCEANOGRAPHIC INSTRUMENT*

ABSTRACT: The article describes an automatic program-controlled wave recorder used in conjunction with an electric-contact wave staff. The wave recorder system described below was designed and tested by the Laboratory for Instruments and Methods for Studying Hydraulic-Engineering Structures of the State Planning, Design and Scientific Research Institute for Marine Transportation of the Ministry of the Merchant Marine. The recorder and power supply are sealed in a 600 x 460 x 440-mm steel box, which is placed on the bottom near the base of the staff and connected to it by a 5-strand RShM cable. The recorder is activated only when the waves reach or exceed a preset height determined by movable contacts on the staff. The recorder is equipped with an expended-tape indicator mounted above water on the wave staff. The operating principles and components are discussed in detail, and a

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ACC NR: AT6028813

circuit diagram of the recorder system is given. When a wave actuates the triggering contact, the recorder switches on for 10 min and then shuts off for 2 hr. If, after 2 hr, no waves of the necessary height are detected, the recorder switches on for 5 sec and makes a special mark on the photosensitive oscillograph tape. The unit is powered by a 29-GRMTs-13, 14.5-v, dry-cell battery. The recorder housing is made of opaque, 6-mm-thick textolite plate. The wave staff used in the tests was a poly(vinyl chloride) tube with 2-cm-wide copper rings spaced 10-cm apart. In the tests, it was found that water film on the staff in the wave trough resulted in a thick trace on the tape. To overcome this, the use of an improved type of contact is recommended. The improved contact consists basically of 2 vertically positioned brass cylinders, one within the other and insulated from each other at the top. Two sets of holes at different heights in the outer cylinder allow water to enter (through the lower holes) the space between the cylinders and thus close the circuit. Most of the air in the cavity between the cylinders is forced out of the upper holes; however, some air is trapped above the upper holes thus preventing water from forming a film across the insulation between the tops of the cylinders. The tape capacity of the recorder is sufficient for recording twelve 10-min periods at a tape speed of 1.5 mm/sec. The electric power from the battery is sufficient for recording sixteen 15-m-long tape reels. Orig. art. has: 2 figures and 1 table. [WA-N04]

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: 002/

Card 2/2

SHEIKUN, I.V.

Determining ground temperature at the depth of the zero curtain.  
Yat. k uch. c merz. zon. zem. kory no.9:195-210 '63 (MIRA 18:1)

POROKHAYEV, G.V., kand.tekhn.nauk; FEDOROVICH, D.I.; SHEYKIN, I.V.;  
DUKHIN, I.I.; SHCHELOKOV, V.K.; SHUR, Yu.L.; FEL'DMAN, G.M.;  
FILIPPOVSKIY, S.M.;

[Thermal physics of freezing and thawing soils] Teplofizika  
promerzaiushchikh i protaivaiushchikh gruntov. Moskva, Nauka,  
1964. 195 p. (MIRA 17:8)

1. Moscow. Institut merzlotovedeniya.

*SHYKIN M.I.*

KONON, E.A., starshiy nauchnyy sotrudnik; SHYKIN, M.I., starshiy nauchnyy sotrudnik.

Practice of spinning flax roving on short staple equipment.  
Tekst.prom. 17 no.6:59-60 Je '57. (MLRA 10:7)

1. Tsentral'nyy nauchno-issledovatel'skiy institut l'nyanogo volokna.  
(Flax) (Spinning machinery)

*SHEPARD*  
SHEYKIN, M.I., kand.tekhn.nauk; BARANOVA, Ye.P.

~~Spinning flax combines.~~ Tekst.prom. 17 no.12:19-22 D '57.  
(MIRA 11:1)

(Flax) (Combing machines)



ACC NR: AT6003864

SOURCE CODE: UR/2865/65/004/000/0308/0315

AUTHOR: Bogina, I. D.; Rokotova, N. A.; Rogovenko, Ye. S.; Sheykin, R. L.

ORG: none

TITLE: Effect of partial limitation of motor activities on basic physiological processes in monkeys

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 308-315

TOPIC TAGS: respiration, brain, animal physiology, experiment-animal, space flight simulation, space physiology, weightlessness, physiologic parameter

ABSTRACT: Experiments with partial restraint of monkeys have been performed during the last two years because under weightless conditions partial restraint of humans and animals has become the standard form of existence during spaceflight. In the authors' laboratories, a restraint system designed by Sheykin, which consists of a restraining collar, a belt, and either a seat (for the macaque monkey) or a foot rest (for the capuchin monkeys), was used.

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L 31313-66  
ACC NR: AT6003864

The first series of experiments was performed on four monkeys for the purpose of determining the effects of prolonged, partial restraint of motor activity on the circadian rhythm of behavior, on the appetite, and the orienting reflex. The monkeys showed an insignificant diminution in the duration of sleep and a depression of the orienting reflex only during the first two to four days after the beginning of the experiment. Their appetite remained good during the entire period of restraint (10 days to 4 months). Daily medical examinations failed to reveal any pathological results of prolonged restraint. After the monkeys were freed from restraint they experienced a certain difficulty in walking. When sitting on a shelf they tried to assume the pose in which they had been restrained. After prolonged restraint (4 months) there was a certain loss of spatial orientation, which manifested itself in the inability of the monkeys to estimate distances properly when jumping. However, all these consequences of restraint disappeared after 2—3 hours. Tests showed that there was no change in sexual drives as a result of prolonged restraint.

The purpose of the second series of experiments was to study diurnal variations in respiratory rhythm, cardiac activity, and bioelectrical activity of the brain of restrained monkeys. Experiments were performed on two capuchin and one macaque monkey. Special features were added to

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ACC NR: AT6003864

Sheykin's restraint system for recording respiration, motor activity, EKG, and EEG. Data from the experiments indicated that changes in the frequency of respiration, in general, were related to motor activities of the monkeys. Respiration in monkeys fluctuated between 32 and 47 cycles per min. Frequency of respiration tended to diminish during the night hours when the monkeys slept. Data obtained two weeks after the beginning of the experiment did not vary much from results obtained during the first three days. Pulse frequency in the macaque monkey ranged from 120 to 160 cps, and in the capuchin from 200 to 250 cps. External stimulation (a rhythmic flashing light) caused the pulse to rise somewhat; in the macaques, for example, it went up to 200 cps. During the course of the experiment the pulse rate tended to remain steady. Restrained macaque monkeys at rest tended to exhibit an alpha-like rhythm with a frequency of 8-12 cps and an average amplitude of 90-95 $\mu$ v. Light stimulation of the eyes caused a distinct inhibition of this rhythm. Capuchin monkeys show a characteristic delta-like rhythm with a frequency of 25-35 cps and an average amplitude of 70 $\mu$ v. The bioelectrical activity of the brain of the monkeys did not show any variations during the period of their restraint. The data obtained in these experiments indicate that under conditions of partial restraint, the respiration, heart beat, and bioelectrical activity of the brain remain within normal limits for the duration of the period of restraint. A comparison of the results of these experiments with those found in the literature

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L 31313-66

ACC NR: AT6003864

indicates that prolonged restraint has certain advantages over comparatively short-term restraint. The relative stability of physiological indices obtained during prolonged restraint indicates that animals in limited-restraint systems could be used as subjects in space-flight experiments. Orig. art. has: 3 figures. [ATD PRESS: 4091-F]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 004 / OTH REF: 003

Card

4/4 L/R

YAKUBENKO, Z.K., mladshiy nauchnyy sotrudnik; BARANOVA, Ye.P., mladshiy  
nauchnyy sotrudnik; Prinsipali uchastiye: SHEYKIN, M.I., kand.  
tekhn.nauk; GORDON, N.B., kand.tekhn.nauk; TARASOV, S.V.,  
kand.tekhn.nauk

Manufacture of nonwoven packing materials from short No.3 flax  
fibers with the gluing method. Nauch.-issl.trudy TSNIILV 17:  
153-162 '62. (MIRA 16:10)

S/865/62/002/000/042/042  
D405/D301

AUTHORS: Rokotova, N.A., Bogina, I.D., Bolotina, O.P.,  
Kucherenko, T.M., Rogovenko, Ye.S. and Sheykin, R.L.

TITLE: Effect of prolonged limitation of motor activity on  
vital functions in monkeys

SOURCE: Problemy kosmicheskoy biologii. v. 2. Ed. by N. Sisa-  
kyan and V. Yazdovskiy. Moscow, Izd-vo AN SSSR, 1962,  
417-427

TEXT: The experiments were conducted on four monkeys (of  
three different types). The first experimental series lasted for  
10 days and the second for 3½ months. The experiments were conduct-  
ed in two different models of fixators: one designed by Lilly and  
Mason, and the second by R.L. Sheykin. The pulse and respiration  
rates were determined, as well as the weight of the monkeys prior  
to, and after the experiments. It was found that prolonged limita-  
tion of motor activity has no harmful effect on the physiological  
functions of the monkeys, their behavior and the state of their ner-

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Effect of prolonged limitation ...

S/865/62/002/000/042/042  
D405/D301

vous system. During the first 2-4 days of restricted motion some (insignificant) changes in sleeping time and a depression in the orienting reflex were observed. These effects did not last long and after 3-5 days already the functions of the animals returned to normal. Monkeys, kept in a fixator, can serve as valuable objects for further investigations. The amount of food consumed by the animals dropped by 26-50%, whereas the composition of the diet remained practically unchanged. The weight of the monkeys increased sharply (by about 50%) during a fixation period of  $3\frac{1}{2}$  months. The pulse and respiration rates were not appreciably affected. The hair and skin were in a good state. The apparatus developed by Sheykin proved to be more advantageous than that of Lilly and Mason. There are 5 figures and 4 tables. The most important English-language references read as follows: Lilly J.C.F. Appl. Physiol., 12, 1 1958 and Mason J.W.F. Appl. Physiol. 12, 1, 1958.

Card 2/2

ROKOTOVA, N.A.; BOGINA, I.D.; BOLOTINA, O.P.; KUCHERENKO, T.M.;  
ROGOVENKO, Ye.S.; SHEYKIN, R.L.

Effect of prolonged limitations of the motor activity on vital  
activities in monkeys. Probl.kosm.biol. 2:417-427 '62.

(MIRA 16:4)

(SPACE MEDICINE)



BOGINA, I.D.; ROKOTOVA, N.A.; ROGOVENKO, Ye.S.; SHEYKIN, R.L.

Effect of partial limitation of motor activity on basic physiological processes in monkeys. Probl. kosm. biol. 4:308-315 '65.  
(MIRA 18:9)

SHENYKIN, S.D.

Experience in dispensary treatment of patients with pyorrhea.  
Stomatologiya 36 no.4:11-15 J1-Ag '57. (MIRA 10:11)

1. Iz kafedry terapevticheskoy stomatologii (zav. - prof. Ye.Ye. Platonov) Moskovskogo meditsinskogo stomatologicheskogo instituta  
(dir. - dotsent G.N.Beletskiy)  
(GUMS--DISEASES)

SHEYKIN, V.P.

Gathering and using petroleum (casinghead) gas in the fields  
of Krasnodar Territory. Gaz. delo no.6/7:86-89 '83.

(MIRA 17:10)

1. Ob'yedineniye "Krasnodarneftegaz."

BLOKH, S.A.; MAYEVSKIY, Ye.R.; SHEYKINA, K.A.

Investigating the operation of kilns for firing grog floater bars.  
Trudy Inst. isp. gaza AN URSR no.5:127-134 '58. (MIRA 11:12)  
(Refractory materials) (Kilns)

KISLYAKOV, V.A.; SHEYKINA, R.L.

Method of studying the effect of the vestibular apparatus upon the higher nervous function. Fiziol.zhur. 39 no.4:486-488 J1-Ag '53. (MLBA 6:8)

1. Laboratoriya interotseptivnykh uslovnykh refleksov Instituta fiziologii imeni I.P.Pavlova Akademii nauk SSSR. (Nervous system)

SHEYKINA, T. A., Cand Biol Sci -- (diss) "Dynamics of conditioned-reflex activity of patients with increased tonus of the skeletal musculature in their treatment with curare-like preparations (elatine, mellictime, and cobanine)." Leningrad, 1960. 14 pp; (Academy of Sciences USSR, Inst of Physiology im I. P. Pavlov); 250 copies; price not given; (KL,18-60, 150)

MAI INOVSKIY, O.V.; SHEYNINA, T.A.

First symposium on postirradiational reparation of the cell.  
TSitolcgia 5 no.5:600-601 S-O '62. (MIRA 18:5)

SERYAKOV, N.I.; SHEYKINA, T.S.; PETROV, V.V.; IDBRIL', Z.Ya.;  
SHESTERIKOV, V.G.; PRONIN, V.M.; LYUBSKIY, G.S.;  
ISAKOV, I.K.; VOLODARSKAYA, V.Ye., red.

[Automated power supply guarantee systems for telecommunication apparatus] Avtomatizirovannye ustroistva garantirovannogo pitaniia apparatury svyazi; informatsionnyi sbornik. Moskva, Izd-vo "Svyaz'," 1964. 132 p.  
(MIRA 17:6)



ZARYVAYSKAYA, Kh. [Zaryvais'ka, Kh.], kand.med.nauk; GOYEVSKAYA, V.  
[Haievs'ka, V.], vrach.; SHEYKINA, Ye., vrach.; VISHNEVA, P.,  
vrach

Results of hygiene tests of hot-air heating systems with natural  
stimulation. Bud.mat.i konstr. no.5:61-62 S-0 '62. (MIRA 15:11)  
(Hot-air heating)

SHEYKMAN, M.B. (Moskva).

Clinical picture and therapy of primary aldosteronism.

Klin.med. 36 no.10:46-54 0 '58

(MIRA 11:11)

1. Iz kafedry endokrinologii (zav. - zaslyzhennyy deyatel' nauki prof. N.A. Shereshevskiy) Tsentral'nogo instituta usovershenstvovaniya vrachey (dir. prof. V.P. Lebedeva) na baze Bol'nitsy imeni Botkina (glavnyy vrach - prof. A.N. Shabanov).  
(ALDOSTERONE,

aldosteronism, primary, clin. picture & ther. (Rus))

SHEYKMAN, M.B.

Changes in blood proteins, lipoproteins, and glucoproteins in  
patients with diabetes mellitus. Klin.med. 38 no.7:36-44 '60.

(BLOOD PROTEINS)

(DIABETES)

(MIRA 13:12)

SHEYKMAN, M.B. (Moskva)

Study of proteins, lipoproteins, and glycoproteins of the blood serum in diabetes mellitus. Vrach. delo no.8:129 Ag '60.  
(MIRA 13:9)

1. Kafedra endokrinologii (zav. - zasl. deyatel' nauki, prof. N.A. Shereshevskiy) TSentral'nogo instituta usovershenstvovaniya vrachey.

(DIABETES)  
(PROTEINS)

(BLOOD—EXAMINATION)  
(LIPOPROTEINS)

(GLYCOPROTEINS)

SHEYKMAN, M. B.

Card Med Sci - (diss) "Change in protein fractions, lipo-proteins and glucoproteins of blood serum in patients with sugar diabetes (without and in the presence of atherosclerosis)." Moscow, 1961. 11 pp; (Academy of Medical Sciences USSR); 300 copies; price not given; (KL, 7-61 sup, 263)

SHEYKMAN, M.B. (Moskva)

Changes in the proteins, lipoproteids and glucoproteids of  
blood serum, and the adrenocortical function in the sulfani-  
lamide treatment of diabetes; abstract. M.B. Sheikman. Kaz.  
med. zhur. no.1:109 Ja-F'61 (MIRA 16:11)

\*

SHEYKMAN, M.B.

Changes in the amount of hexose bound with serum proteins in  
diabetes mellitus. Probl. endok. i gorm. 7 no.1:91-96 '61.

(MIRA 14:3)

(DIABETES) (HEXOSE)  
(BLOOD PROTEINS)

SHEYKMAN, M.B.

Method of staining glycoproteids in electrophoregrams (simplified modification). Lab. delo 7 no.5:21-22 My '61. (MIRA 14:5)

1. Kafedra endokrinologii (zav. - zasluzhennyy deyatel' nauki prof. N.A.Shereshevskiy [deceased]) Tsentral'nogo instituta usoverhsenstvovaniya vrachey, Moskva.

(GLYCOPROTEINS) (ELECTROPHORESIS)  
(STAINS AND STAINING (MICROSCOPY))



ZAYTSEV, V.F.; MYASNIKOV, I.A.; SHEYKMAN, M.B.

Effect of ascorbic acid on the distribution of  $4\text{ C}^{14}$ -labeled  
cholesterol in tissues in experimental atherosclerosis. Kardiologiya  
4 no.6:30-34 N-D '64. (MIRA 18:8)

1. Institut terapii (direktor - prof. A.L.Myasnikov) AMN SSSR, Moskva.

POKROVSKIY, A.A.; SHEYKMAN, M.B.; FLEENITSYNA, R.A.

Study of the activity of lipolytic enzymes in the adipose tissue.  
Vop. med. khim. li no.4:72-76 31-Ag '66. (MIRA 18.6)

1. Laboratoriya klinicheskoy enzimologii Instituta pitaniya  
AMN SSSR, Moskva.

SHEYKMAN, M.B.

Review of the "Journal of atherosclerosis research" for 1961.  
Kardiologiia 2 no.5:86-89 S-O '62. (MIRA 15:12)  
(ARTERIOSCLEROSIS--PERIODICALS)

VOLOSHCHENKO, M.V.; DZYBAL, L.T.; KLIMENKO, V.M.; SHEYKO, A.A.;  
MALAFIY, G.V.

Production of cast iron crankshafts with spheroidal graphite  
for 6Ch 12/14 diesels. Lit. proizv. no.8:41-42 Ag '61.  
(MIRA 14:7)

(Iron founding) (Cranks and crankshafts)

VOLOSHCHENKO, M.V.; KLIMENKO, V.M.; SHEYKO, A.A.

Making castings of cupola-melted austenitic iron with spheroidal  
graphite. Nauch. trudy Inst. lit. proizv. AN URSR 11:55-57 '62.  
(MIRA 15:9)

(Cast iron)

BURDYUG, G.K.; VOLOSHCHENKO, M.V.; KLIMENKO, V.M.; SHEYKO, A.A.,

Ultrasonic control of crankshafts made of nodular cast iron.

Nauch. trudy Inst. lit. proizv. AN URSR 11:65-69 '62.

(MIRA 15:9)

(Cast iron--Testing) (Ultrasonic testing)

1. SHEYKO, A. N. Eng.: RAZGON, L. I.: KOTARDIN, N. T.
2. USSR (600)
4. Soap
7. Applying Bogod's method in the "Novyi mylovar" Factory. Masl. Zhir. prom. 17, no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Uncl.

SHEIKO, H. N.

## USSR:

✓ Method of boiling 60% household soap without settling.  
A. N. Sheiko, L. L. Razgon, and N. T. Komardin. *Maslo-  
boino-Zhirovaya Prom.* 10, No. 8, 20-2(1954).—In this  
process stock is boiled with enough soda and soda ash to  
saponify 60% of fatty, naphthenic, and resin acids. Car-  
bonic sapon, is replaced by that of caustic at the point when  
fatty acids and calcined soda contents in the soap are 60-70  
and 0.35%, resp., and fatty acidity in "carbonated mass"  
is 20-5%. Toward the end of the boiling operation the  
soap should contain free alkali 0.15-0.2, fatty acids 62-3.5,  
calcined soda 0.15-0.3, and salt 0.3-0.4%.

Vladimir N. Krukovsky



СЛЕДСТВО,  
МЕТОДЫ, АЛГОРИТМЫ И Т.Д.

7/5  
106.1  
107

См. вилі логічного доказування (rules of logical evidence) Київ,  
Ін-во філософії. Університета, 1956.

104.1.

At Head of Title: Ukraine. Ministerstvo Vyshchego Oshchovaniya (and) Kiev.  
Universitet.

Bibliographical instruction.

106.1 H/5  
107.2 H/5

NEA

SHEYKO, A.N.; P'YASKOVSKIY, B.V. [P'iaskovs'kiy, B.V.]

"Dialectics as logic" by P.V.Kopnin. Reviewed by A.N.Sheiko.  
Dop. AN URSR no.2:273-275 '62. (MIRA 15:2)  
(Dialectical materialism)

MUSHKALO, L.K.; SHEYKO, D.I.

Condensation of o-aminoselenophenol with unsaturated carboxylic acids. Ukr. khim. zhur. 30 no.4:384-387 '64. (MIRA 17:6)

1. Kiyevskiy gosudarstvennyy universitet imeni Shevchenko.

SHEYKO, A. P.

Sheep

Application of milk douches in spasms of the cervix uteri during parturition  
Veterinariia, 29, no. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953<sup>2</sup> Unclassified.

SHEYKO, B. G.

23376 Pryazha Iz Shtatel'nogo Steklovolokna. Legkaya Prom-st', 1949, No. 6, c.21-23

SO: LETOPIS NO. 31, 1949

SHEYKO, D.F., shtanpovshchik.

Automatic feeding blanks. Prom. koop. no. 5:5-9 of '58. (MIRA 11:4)

1. Artel' "Metallist, "Khar'kov.  
(Power presses--Safety appliances)

MUSHKALO, L.K.; SHEYKO, D.I.; LANOVAIA, Ye.I.

Condensat' of o-aminoselenophenol with unsaturated ketones.  
Report No 2. Ukr.khim.zhur. 30 no.5:502-503 '64.

(MIRA 18:4)

1. Kiyevskiy gosudarstvennyy universitet.

ZHIKHAREVICH, A.S.; KARAULOV, A.G.; PANICH, B.I.; SHEYKO, I.I.;  
POLYAKOV, V.F.; KHALEMSKIY, S.F.

Replacement of cast steel plugs used in the top pouring of  
steel by ceramic graphite-bearing inserts. Metallurg 6  
no.11:18-19 N '61. (MIRA 14:11)

(Steel ingots)



ANTONOV, G. I., inzh.; SHEYKO, I. I., inzh.; KHALEMSKIY, S. F., inzh.;  
KAL'NOY, Ye. L., inzh.

Using 50 mm. facing bricks in open-hearth furnaces in foundries.  
Mashinostroenie no. 5:42-43 S-O '62. (MIRA 16:1)

1. Ukrainskiy institut ogneporov i Zavod im. Malysheva.

(Open hearth furnaces—Equipment and supplies)

L 00891-67 EWT(m)/T/EWF(t)/ETI IJP(c) JD/JW/JG

ACC NR: AP6021617

SOURCE CODE: UR/0021/66/000/006/0782/0784

AUTHOR: Sheyko, I. M. — Sheyko, I. N.; Bukhalova, H. O. — Bukhalova, G. A.; Mal'tsev, V. T.

ORG: Institute of General and Inorganic Chemistry, AN URSR (Instytut zahal'noyi ta neorhanichnoyi khimiyi AN URSR) 32 B

TITLE: The  $KF-HfF_4$  binary system

SOURCE: AN UkrRSR. Dopovidi, no. 6, 1966, 782-784

TOPIC TAGS: hafnium compound, fluoride, thermographic analysis, phase composition

ABSTRACT: The authors study the  $KF-HfF_4$  system at 400-1000°C with a hafnium fluoride concentration of up to 55 mol.% by the visual-polythermal method and up to 35 mol.% by the thermographic method on M. S. Kurnakov's pyrometer. Heat effects which interfere with the study are encountered when hafnium fluoride concentration exceeds 55%. The visual-polythermal, thermographic and x-ray phase methods show that two congruently melting compounds,  $K_3HfF_7$  and  $KHfF_6$ , and one incongruently melting compound,  $K_2HfF_6$ , are formed during crystallization from liquidus in this binary system where  $HfF_4$  concentration is less than 50 mol.%, while the compound  $K_4HfF_8$  is formed in the solid phase. The article was presented for publication by Academician Yu. K. Delimars'kyi. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 19Jun65/ ORIG REF: 004

Card 1/1 afs

L 45770-66 EWT(m)/ENP(t)/ETI IJP(c) JD/JG

ACC NR: AP6026299

SOURCE CODE: UR/0021/66/000/007/0917/0919

AUTHOR: Sheyko, I. M. -- Sheyko, I. N.; Bukhalova, H. O. -- Bukhalova, G. A.;  
Mal'tsev, V. T.

38.  
B

ORG: Institute of General and Inorganic Chemistry, AN URSR (Instytut Zahal'noyi ta neorhanichnoyi khimiyi AN URSR)

TITLE: NaF-KF-HfF<sub>4</sub> ternary system

SOURCE: AN UkrRSR. Dopovid, no. 7, 1966, 917-919

TOPIC TAGS: hafnium compound, sodium compound, potassium compound, fluoride, thermographic analysis, crystallization, eutectic mixture, solid solution, ternary alloy, phase diagram

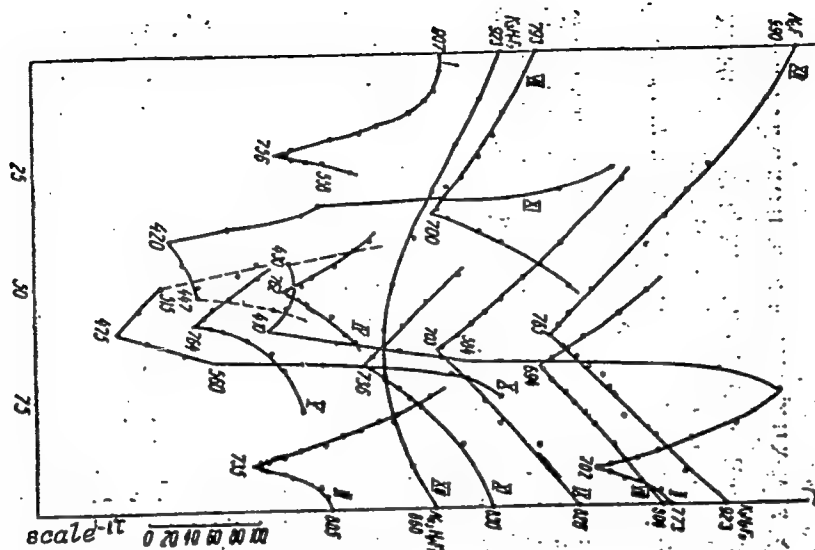
ABSTRACT: The paper is a continuation of the authors' study on the interaction of hafnium fluoride with potassium and sodium fluorides in solution to obtain data for the electrometallurgy of hafnium. The method used for studying, preparation of alloys and apparatus used in this study is described in previous works by the authors. Both the visual polythermic and thermographic methods were used for studying melting in the NaF-KF-HfF<sub>4</sub> system. Thirteen internal sections were studied (see figure 1).

A figure is given for the projection of the liquidus surface on the phase diagram for

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L 45770-66

ACC NR: AP6026299



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L 45770-66

ACC NR: AP6026299

6

the NaF-KF-HfF<sub>4</sub> ternary system. It is shown that surface crystallization is divided into 6 fields by monovariant curves: field I - HfF<sub>4</sub>, II - NaHfF<sub>5</sub>-KHfF<sub>5</sub> solid solution; III - Na<sub>2</sub>HfF<sub>6</sub>-K<sub>2</sub>HfF<sub>6</sub> solid solution; IV - Na<sub>3</sub>HfF<sub>7</sub>-K<sub>3</sub>HfF<sub>7</sub> solid solution; V - NaF; VI - KF. It is shown that the system has one ternary eutectic point with the composition: 27 mol.% NaF, 65% Kf, 8% HfF<sub>4</sub> with a melting point of 680°C. Visual polythermic and thermographic methods show that the compounds Na<sub>3</sub>HfF<sub>7</sub>, K<sub>3</sub>HfF<sub>7</sub>, Na<sub>2</sub>HfF<sub>6</sub>, K<sub>2</sub>HfF<sub>6</sub>, KNaHfF<sub>5</sub> and KHfF<sub>5</sub> form a continuous series of solid solutions, thus showing their isomorphism. The article was presented for publication by Academician AN URSR Yu. K. Delimars'ky. Orig. art. has: 2 figures.

SUB CODE: 07, 20/ SUBM DATE: 19Jun65/ ORIG REF: 006

Card 3/3

USSR/Chemistry - Electrolytic Deposition Apr 51

"Determination of Individual Electrode Potentials in Fused Aluminum Chloride-Sodium Chloride as Solvent," Yu. K. Delimarshiy, L. S. Berenblyum, I. N. Sheyko, Inst Gen and Inorg Chem, Acad Sci Ukrainian SSR, Kiev

"Zhur Fiz Khim" Vol XXV, No 4, pp 398-403

Examd decompn potentials, Polarization emf, sep cathode and anode potentials in respect to Pt ref electrode of chlorides of Ni, Co, Ti, Mn, Zn, Cd, Sn, Pb, Cu, Ag, Sb, Bi in fused  $AlCl_3$ -NaCl electrolyte at 300-500°C. Noted 2 electrode potentials for Cd, Sn; linked 2d to cathodic process. Discusses different effect of temp on Ni, Co from that on other metals.

180T21

SHEYKO, I. N.

~~Electrical conductivity in the beryllium chloride-sodium chloride system. Yu. K. Delmarshki, I. N. Sheiko, and V. G. Frishchenko. Vest. Gen. and Inter. Chem. Acad. Sci. Ukr. SSR, Kiev. Zhur. Fiz. Khim. 29, 1409-1507 (1955).—The elec. cond. of pure  $\text{BeCl}_2$  and  $\text{NaCl}$  was detd. between 445° and 489°. The data were used to calc. the activation energy of  $\text{BeCl}_2$  and the electrolyte dissoen. of fused  $\text{BeCl}_2$ . The elec. cond. of  $\text{BeCl}_2\text{-NaCl}$  with 50-78.5 mol %  $\text{BeCl}_2$  was detd. between 250 and 500°. The isotherms and the polytherms of the specific cond. in the  $\text{BeCl}_2\text{-NaCl}$  system were constructed from the expd. data; also the temp. coeff.-compn. curves. Two max. and two min. were found on the elec. cond. isotherms and on the temp. coeff.-compn. curve. The  $\log \kappa$  and  $1/T$  are in almost linear relation in the system. The largest deviations from the linear relation is found in compns. close to the eutectic. The elec. cond. data indicate the existence of the  $\text{Na}_2\text{BeCl}_4$  compd., and of the eutectics formed with it.~~

W. M. Sternberg

LFI

SHEYKO, I.N.; DELIMARSKIY, Yu.K.

Investigating the decomposition potentials of the system  $\text{BeCl}_2$  —  
NaCl with regard to the correlation of components in the fusion.  
Ukr.khim.zhur. 23 no.6:713-720 '57. (MIRA 11:1)

1. Institut obshchey i neorganicheskoy khimii AN USSR.  
(Beryllium chloride) (Salt)



S/073/60/026/003/011/011/XX  
B023/B060

AUTHORS: Sheyko, I. N. and Feshchenko, V. G.

TITLE: On the Occasion of N. S. Kavetskiy's Review of the  
Article "Study of the Decomposition Voltage of the  
 $K_2ZrF_6$  - NaCl - KCl System"

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, 1960, Vol. 26, No. 3,  
pp. 394-395

TEXT: N. S. Kavetskiy states without producing any experimental or theoretical proof that the diaphragm provided with an opening, used by the authors in their investigation (Ref. 1), functions as a bipolar electrode. He bases on this unjustified statement to declare that the method applied by the authors is wrong. It is a known fact, so the authors go on, that a plate or a net or a substance exhibiting electrical conductivity, may function also as a diaphragm, and not only as a bipolar electrode. This depends on the construction of the electrolytic cell and on its working conditions. This ability has been widely exploited in numerous electrolytic cells of industrial and laboratory types (Refs. 4-6). Graphite diaphragms with an opening of 1-2 mm in diameter have been applied

Card 1/3

On the Occasion of N. S. Kavetskiy's Review  
of the Article "Study of the Decomposition  
Voltage of the  $K_2ZrF_6$  - NaCl - KCl System"

S/073/60/026/003/011/011/XX  
B023/B060

the value 1.25 v (which fits the data from literature per Ref. 12) contradicts Kavetskiy's statement concerning the additional polarization, said to have taken place in the investigation (Ref. 1). Consequently, all his objections concerning the interpretation of the J-V curves are annulled. Kavetskiy's remark stating the impossibility of studying the electrode polarization in the precipitation of zirconium with the aid of a zirconium reference electrode is based on a misunderstanding. This generally applied method of investigating the electrode polarization and the difference among the potentials between two equal electrodes is explained by concentration polarization and the partial irreversibility of the electrode processes. A paper by V. S. Lyashchenko (Ref. 15) is mentioned. There are 1 table and 15 references: 12 Soviet, 2 US, and 1 Italian. ✓

Card 3/3

SHEYKO, I.N.; GORODYSKIY, A.V.; BYKOVA, M.I.

Polarographic observation of fused potassium fluozirconate. Zhur. A  
neorp.khim. 6 no.10:2341-2343 0 '61. (MIRA 14:9)  
(Potassium fluozirconate) (Polarography)

52200

<sup>26279</sup>  
S/073/61/027/004/003/004  
B127/B203

AUTHORS: Sheyko, I. N., Chernov, R. V., and Kikhno, V. S.

TITLE: Melting diagrams of some salt systems containing potassium fluozirconate. Communication I

PERIODICAL: Ukrainskiy khimicheskii zhurnal, v. 27, no. 4, 1961, 469-473

TEXT: For obtaining metallic zirconium, the electrolysis of salt melts is used; the melting diagrams of these salts were studied by the authors. Primarily,  $\text{KF-K}_2\text{ZrF}_6$ ;  $\text{KCl-K}_2\text{ZrF}_6$ ;  $\text{KCl-K}_3\text{ZrF}_7$ ;  $\text{NaCl-K}_2\text{ZrF}_6$ ;  $\text{KCl-NaCl-K}_3\text{ZrF}_7$ . The studies were conducted by the visual-polythermic method. Arrangement: A platinum pot placed in quartz was arranged in an electric furnace with a Pt-Pt-Rh thermocouple in argon atmosphere; results are given in Figs. 1 - 5. All systems melt congruently; the systems  $\text{KCl-K}_3\text{ZrF}_7$  and  $\text{KCl-NaCl-K}_3\text{ZrF}_7$  show a simple eutectic;  $\text{K}_2\text{ZrF}_6$ , however, melts incongruently, and the salt  $\text{K}_3\text{ZrF}_7$  first crystallizes out of its melt. There are 5 figures and 6 references: 4 Soviet and 2 non-Soviet. Card 1/7

26279

S/073/61/027/004/003/004

B127/B203

Melting diagrams of some salt systems ...

The two references to English-language publications read as follows:  
Ref. 3: M. Steinberg, M. Sibert, E. Wainer, J. Electrochem. Soc., 101,  
63 (1954); 103, 137 (1955); Ref. 5: C. I. Barton, W. R. Crimes,  
H. Insley, R. E. Moore, R. E. Throma, J. physic. chem., 62, 665 (1958).

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR  
(Institute of General and Inorganic Chemistry AS UkrSSR)

SUBMITTED: April 29, 1960

Fig. 1. System  $\text{KF-K}_2\text{ZrF}_6$

Fig. 2. System  $\text{KCl-K}_2\text{ZrF}_6$

Fig. 3. System  $\text{KCl-K}_3\text{ZrF}_7$

Fig. 4. System  $\text{NaCl-K}_2\text{ZrF}_6$

Fig. 5. System  $\text{KCl-NaCl-K}_3\text{ZrF}_7$

Card 2/7

SHEYKO, I.N.; FESHCHENKO, V.G. [Feshchenko, V.H.]

Determination of the decomposition potentials of fused salts  
in graphite cells. Ukr. khim. zhur. 27 no.4:473-478 '61.  
(MIRA 14:7)

1. Institut obshchey i neorganicheskoy khimii AN USSR.  
(Salts) (Electromotive force)

30871  
S/073/61/027/006/003/005  
B110/B147

5. 4700

AUTHORS:

Sheyko, I. N., Gorodyskiy, A. V., Kuz'movich, V. V.

TITLE:

Polarography of molten systems containing zirconium compounds

PERIODICAL: Ukrainskiy khimicheskii zhurnal, v. 27, no. 6, 1961, 767 - 770

TEXT: Molten Zr compounds were studied polarographically to obtain some data on the electrolytic deposition of Zr from melts. An automatic polarograph with solid stationary electrodes with depolarization of the electrodes between the exposures by short-circuiting was used. A 5 mm long and 0.5 mm thick Pt wire served as cathode while a 2500 mm<sup>2</sup> Pt disk was taken as anode. The melt was in a porcelain crucible in a quartz test tube in an Ar atmosphere. Molten systems of K<sub>2</sub>ZrF<sub>6</sub>, ZrCl<sub>4</sub>, and ZrO<sub>2</sub> were investigated, molten equimolar mixture of KCl and NaCl being used as a background. Two waves were found in the polarogram of K<sub>2</sub>ZrF<sub>6</sub> with 2-5 mole% concentration, which indicate the presence of transformation products of electrolytic dissociation of K<sub>2</sub>ZrF<sub>6</sub>.  $xK^+ + (F^-)_x \cdot ZrF_4 \rightleftharpoons (KF)_x \cdot ZrF_4$

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30871

S/073/61/027/006/003/005

B110/B147

Polarography of molten systems...

$\rightleftharpoons (KF)_x \cdot ZrF_y^{(4-y)+} + (4-y)F^-$ , where  $(y = 0 + 4)$ . Small amounts of a transformed form (TF) of  $K_2ZrF_6$  cause the occurrence of waves in the polarograms of pure  $K_2ZrF_6$  and react on the electrode at lower voltages. Discharge of TF can only be effected by low current densities. An additional increase of voltage causes separation of alkali metal or Zr, or reduction of the original form (OF) of  $K_2ZrF_6$  to Zr metal. It was possible to observe OF waves on a background of alkali metal when polarographing dilute  $K_2ZrF_6$  melts (0.1%). Presumably, the maxima of the two waves of the OF polarograms are caused by variation of the active electrode surface. Since both OF waves have the same height, reduction to Zr metal probably takes place according to "4-2-0" (two successive processes) or according to "4-2, 4-0" (two parallel processes). For the systems  $KCl \cdot NaCl \cdot ZrCl_4$ ,  $KCl \cdot NaCl \cdot ZrO_2$ ,  $KCl \cdot NaCl \cdot NaF \cdot ZrO_2$  the electrodic processes were only estimated approximately. As  $ZrCl_4$  possesses a considerable vapor tension at melting temperature, its 30% solution was used

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SHEKA, I.A., otv. red.; DELIMARSKIY, Yu.K., red.; KOZACHEK, N.N., red.; NATANSON, E.M., red.; SHEYKO, I.N., red.; MATVIYCHUK, A.A., tekhn. red.

[Applications of zirconium and its compounds in industry; materials]  
Primenenie tsirkoniia i ego soedinenii v promyshlennosti; materialy.  
Kiev, Izd-vo Akad. nauk USSR, 1962. 97 p. (MIRA 15:7)

1. Soveshchaniye pri gosplane GNTK i Akademii nauk USSR, Kiev, 1960.  
(Zirconium—Industrial applications)

SHEKA, I.A., otv. red.; DELIMARSKIY, Yu.K., red.; KOZACHEK, N.N., red.;  
NATANSON, E.M., red.; SHEYKO, I.N., red.; MATVIYCHUK, A.A.,  
tekhn. red.

[Materials of the Technological Conference on the Use of  
Zirconium and its Compounds in Industry] Materialy Nauchno-  
tekhnicheskogo soveshchaniia po primeneniui tsirkoniia i ego  
soedinenii v promyshlennosti, Kiev, 1960. Kiev, Izd-vo Akad.  
nauk USSR, 1962. 97 p. (MIRA 15:4)

1. Nauchno-tekhnicheskoye soveshchaniye po primeneniuyu tsirko-  
niya i yego soyedineniy v promyshlennosti, Kiev, 1960.  
(Zirconium—Congresses)

43054

S/826/62/000/000/004/007  
D408/D307

5.4700

AUTHORS:

Sheyko, I.N., Chernov, R.V. and Kikhno, V.S.

TITLE:

Phase diagram of the chloride-fluoride system  
of sodium, potassium, and zirconium

SOURCE:

Fizicheskaya khimiya rasplavlennykh soley i  
shlakov; trudy Vses. soveshch. po fiz. khimii  
raspl. soley i shlakov; 22 - 25 noyabrya 1960  
g. Moscow, Metallurgizdat, 1962, 72 - 76

TEXT:

The authors investigated the behavior of molten  $K_2ZrF_6$  on cooling and the phase diagrams of the systems  $K_2ZrF_6$ --  
 $KCl$ ,  $K_2ZrF_6$ -- $NaCl$ ,  $K_2ZrF_6$ -- $KF$ ,  $K_3ZrF_7$ -- $KCl$ ,  $K_3ZrF_7$ -- $NaCl$ , and  
 $K_3ZrF_7$ -- $KCl$ -- $NaCl$  by the cooling curve method, in order to make  
good deficiencies in the literature concerning potential electro-  
lytic production of Zr.  $K_3ZrF_7$  was prepared by fusing together  
the appropriate amounts of  $KF$  and  $K_2ZrF_6$  melted incongruently and,  
when the melt was cooled,  $K_3ZrF_7$  was the first compound to crystal-

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S/826/62/000/000/004/007  
D408/D307

Phase diagram ...

lize out, at  $757^{\circ}\text{C}$ . A thermal effect observed at  $591^{\circ}\text{C}$  probably corresponded to the formation of the compound  $\text{ZrF}_4 \cdot m\text{KF}$ , where  $m < 3$ . The phase diagram of the  $\text{K}_2\text{ZrF}_6$ --KF system showed the formation of  $\text{K}_3\text{ZrF}_7$ , melting at  $921^{\circ}\text{C}$ , and a eutectic containing 17 mol.%  $\text{K}_2\text{ZrF}_6$ , which melted at  $766^{\circ}\text{C}$ . The systems  $\text{K}_3\text{ZrF}_7$ --KCl, equimolar KCl - NaCl mixture-- $\text{K}_3\text{ZrF}_7$ , and  $\text{K}_3\text{ZrF}_7$ --NaCl were also found to be relatively simple, having single eutectics containing 23, 21 and 20 mol.%  $\text{K}_3\text{ZrF}_7$  and melting at 660, 630 and  $555^{\circ}\text{C}$  respectively; a solid solution of NaCl in  $\text{K}_3\text{ZrF}_7$  was also observed in the  $\text{K}_3\text{ZrF}_7$ --NaCl system. The  $\text{K}_2\text{ZrF}_6$ --KCl system was characterized by the presence of the compound  $\text{K}_3\text{ZrF}_6\text{Cl}$ , congruently melting at  $730^{\circ}\text{C}$ , and two eutectics containing 23 and 95 mol.%  $\text{K}_2\text{ZrF}_6$  melting at 678 and  $562^{\circ}\text{C}$  respectively. The  $\text{K}_2\text{ZrF}_6$ --NaCl system was the most complex of systems investigated, and interpretation of the obtained results is difficult: The liquids curve consists of three branches, the NaCl and  $\text{K}_3\text{ZrF}_6\text{Cl}$  branches intersecting at  $550^{\circ}\text{C}$  and 28 mol.%  $\text{K}_2\text{ZrF}_6$ , and  $\text{K}_3\text{ZrF}_6\text{Cl}$  and  $\text{K}_3\text{ZrF}_7$  branches intersecting at  $630^{\circ}\text{C}$  and 79 mol.%  $\text{K}_2\text{ZrF}_6$ . The existence of the  $\text{K}_3\text{ZrF}_6\text{Cl}$  was deduced from experiments

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Phase diagram ...

S/826/62/000/000/004/007  
D408/D307

carried out by the method of temperature depression, whereby the addition of KCl to the melt containing 60 - 65 mol.%  $K_2ZrF_6$  increased the temperature of initial crystallization, and with further addition of KCl the rate of temperature rise slowed down, or the temperature even partially decreased; addition of  $Na_2ZrF_6$  decreased the temperature of initial crystallization. There are 6 figures.

ASSOCIATION:

Institut obshchey i neorganicheskoy khimii AN USSR  
(Institute of General and Inorganic Chemistry AS  
UkrSSR)

X

Card 3/3

S/073/62/028/004/003/004  
1017/1217

AUTHORS: I.N. Sheyko, and V.G. Feshchenko

TITLE: Study on the partial elasticity of Berilium chloride vapors in mixtures with sodium and potassium chlorides

PERIODICAL: Ukrainskii khimicheskii zhurnal, v.28, no.4, 1962, 473-483

TEXT: The elasticity of the  $\text{BeCl}_2$  vapors and the partial elasticity of the systems  $\text{BeCl}_2\text{-NaCl}$  and  $\text{BeCl}_2\text{-KCl}$  are studied. It was found that a linear dependence exists between  $\lg p$  and  $1/T$ . The partial elasticity of  $\text{BeCl}_2$  for the system  $\text{NaCl-BeCl}_2$  is higher than that obtained for the system  $\text{KCl-BeCl}_2$ . This is explained by the higher stability of the complex compound  $\text{K}_2\text{BeCl}_4$  in comparison to  $\text{Na}_2\text{BeCl}_4$ . The calculated activities and activity coefficient at  $400^\circ\text{C}$  for the systems  $\text{NaCl-BeCl}_2$  and  $\text{KCl-BeCl}_2$ , show that the activity of  $\text{BeCl}_2$  in the system  $\text{NaCl-BeCl}_2$  is higher than its activity in the system  $\text{KCl-BeCl}_2$ . ✓

Card 1/2

S/073/62/028/004/003/004  
I017/I217

Study on the partial elasticity...

ASSOCIATION: Institut obchtoy y neorganicheskoy khimii AN USSR  
(Institute for General and Inorganic Chemistry AS  
Ukr SSR)

SUBMITTED: June 16, 1961

Card 2/2

SHEYKO, I.N.; FESHCHENKO, V.G.

Partial pressure of beryllium chloride vapors in a mixture with  
sodium and potassium chlorides. Ukr.khim. zhur. 28 no.4:478-483  
'62. (MIRA 15:8)

1. Institut obshchey i neorganicheskoy khimii AN USSR.  
(Beryllium chloride) (Vapor pressure)



SHEYKO, I.N.

Electrolytic separation of powdered zirconium from fused salts.  
Ukr.khim.zhur. 29 no.1:57-63 '63. (MIRA 16:5)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.  
(Zirconium--Electrometallurgy) (Fused salts)

SHEYKO, I.N.; KIKHNO, V.S.; MEL'NIKOV, V.I.

Melting diagram of the ternary system  $\text{NaF} - \text{KF} - \text{ZrF}_4$ . Ukr.khim.  
zhur. 29 no.12:1259-1264 '63. (MIRA 17:2)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

ACCESSION NR: AP4040756

S/0073/64/030/006/0577/0581

AUTHOR: Sheyko, I. N.; Barchuk, V. T.

TITLE: Zirconium dichloride behavior in molten mixtures of alkali- and alkali earth chlorides

SOURCE: Ukrainskiy khimicheskij zhurnal, v. 30, no. 6, 1964, 577-581

TOPIC TAGS: zirconium dichloride, zirconium tetrachloride, zirconium dichloride disproportioning, alkali chloride, alkali earth chloride

ABSTRACT: The object of the study was to find the behavior of zirconium dichloride in the following melts: KCl-LiCl, KCl-NaCl, NaCl-CaCl<sub>2</sub>, KCl-MgCl<sub>2</sub>, NaCl-MgCl<sub>2</sub>, NaCl-BaCl<sub>2</sub>, NaCl-AlCl<sub>3</sub>, KCl-NaCl-ZrCl<sub>2</sub>. It was found that up to 400C ZrCl<sub>2</sub> remains unchanged and insoluble. It is present in the melt in the form of a fine suspension. Above 400C, depending on the composition of the melt, it dissociates into ZrCl<sub>4</sub> and Zr metal which remains in suspension together with the unreacted ZrCl<sub>2</sub> at its surface (in a state of equilibrium) while ZrCl<sub>4</sub> dissolves in the melt. This process depends on the nature of the melt, on temperature, and on the duration of the experiment. The quantity of ZrCl<sub>2</sub> suspended in the melt depends

Card 1/2

ACCESSION NR: AP4040756

on the temperature and the stability of the Zr metal suspension. All melting tests were made in an argon atmosphere, since Zr powder spontaneously ignites in the air. The conversion of  $ZrCl_4$  into  $ZrCl_2$  is practically completed in the first 30 min. Orig. art. has: 3 figures, 2 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR  
(Institute of General and Inorganic Chemistry AN UkrSSR)

SUBMITTED: 28Dec62

ENCL: 00

SUB CODE: IC

NR REF SOV: 002

OTHER: 000

Corr

2/2



SHEVKO, I.N.; MEL'NIKOV, V.I.; SUPRONCHUK, V.I.

Welding diagram of the system  $\text{NaCl} - \text{KCl} - \text{K}_2\text{ZrF}_6 - \text{K}_2\text{ZrF}_4$ .  
Ukr. khim. zhur. 30 no.7:688-69, '64 (MIRA 18:1)

1. Institut obshechey i neorganicheskoy khimii AN UkrSSR.

L 63642-65 EWT(m)/EWP(b)/EWP(t) — IJP(c) JD  
 ACCESSION NR: AP5017982

UR/0073/65/031/007/0710/0713  
 543.7+620.193.43

17  
 16  
 B

AUTHOR: Sheyko, I. N.; Bukhalova, G. A.; Mal'tsev, V. T.

TITLE: Fusibility diagram of a reciprocal system of sodium and potassium fluorides and fluohafnates

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 7, 1965, 710-713

TOPIC TAGS: sodium fluohafnate, potassium fluohafnate, sodium fluoride, potassium fluoride, fusibility diagram, fused salt system

ABSTRACT: The system  $\text{Na}_3\text{F} - \text{K}_3\text{F}$ ,  $\text{HfF}_7$  was studied by a visual polythermal method in dry carbon dioxide. The following eutectics were found: in  $\text{Na}_3\text{F}_3 - \text{Na}_3\text{HfF}_7$  at 762C and 22%  $\text{Na}_3\text{F}_3$  and in  $\text{K}_3\text{F}_3 - \text{K}_3\text{HfF}_7$  at 766C and 55.5%  $\text{K}_3\text{F}_3$ . In  $\text{Na}_3\text{HfF}_7 - \text{K}_3\text{HfF}_7$ , a continuous series of solid solutions with a minimum at 815C and 35%  $\text{K}_3\text{HfF}_7$  was observed. The crystallization surface of the system  $\text{Na}^+, \text{K}^+ // \text{F}^-$ ,  $\text{HfF}_7$  was found to consist of three fields of crystallization, those of sodium fluoride, potassium fluoride, and continuous solid solutions of sodium and potassium heptafluohafnates. The system is reciprocal and irreversible. The  $\text{Na}_3\text{F}_3 - \text{K}_3\text{HfF}_7$  diagonal section is in the nature of a binary system and divides the com-

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ACCESSION NR: AP5017982

position square into two phase triangles. The  $K_3F_3$  -  $Na_3F_3$  -  $K_3HfF_7$  phase triangle has a eutectic point at 680C with the composition 32%  $Na_3F_3$ , 25%  $K_3HfF_7$ , 43%  $K_3F_3$ . In the  $Na_3F_3$  -  $K_3HfF_7$  -  $Na_3HfF_7$  phase triangle, the curve of cocrystallization of sodium fluoride and solid solutions of sodium and potassium heptafluorohafnates has a slight minimum at 756C and the composition 20%  $Na_3F_3$ , 20%  $K_3HfF_7$ , 60%  $Na_3HfF_7$ . The system  $Na^+$ ,  $K^+$  //  $F^-$ ,  $HfF_7^{3-}$  is the first representative of fused salt systems involving alkali metal fluorohafnates. Orig. art. has: 3 figures.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR (Institute of General and Inorganic Chemistry, AN UkrSSR)

SUBMITTED: 05Feb65

ENCL: 00

SUB CODE: IC, G-C

NO REF SOV: 002

OTHER: 000

Card <sup>NC</sup> 2/2



SHETKO, I.N.; SUPRUNCHUK, V.I.; BANCOR, T.A.

Fusibility diagram of the ternary system  $\text{NaF} - \text{NaCl} - \text{Na}_2\text{ZrF}_6$   
Ukr. khim. zhur. 31 no.9:927-930 '65. (MIRA 18:11)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

SHEYKO, I.N.; DERKS, O.F.; POZDNYAKOV, A.N.

Density and molar volume of the ternary system. Ukr. khim. zhur.  
31 no.10:1055-1060 '65. (MIRA 19:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR. Submitted  
September 25, 1964.

SHEYKO, I.N.; CHERNOV, R.V.; SUPRUNCHUK, V.I.

Fusibility diagram of the ternary system  $KF - KCl - K_2ZrF_6$ .

Ukr. khim. zhur. 31 no. 11:1143-1147 '65 (MIRA 19:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

ACC NR: AT6028813

circuit diagram of the recorder system is given. When a wave actuates the triggering contact, the recorder switches on for 10 min and then shuts off for 2 hr. If, after 2 hr, no waves of the necessary height are detected, the recorder switches on for 5 sec and makes a special mark on the photosensitive oscillograph tape. The unit is powered by a 29-CRMTs-13, 14.5-v, dry-cell battery. The recorder housing is made of opaque, 6-mm-thick textolite plate. The wave staff used in the tests was a poly(vinyl chloride) tube with 2-cm-wide copper rings spaced 10-cm apart. In the tests, it was found that water film on the staff in the wave trough resulted in a thick trace on the tape. To overcome this, the use of an improved type of contact is recommended. The improved contact consists basically of 2 vertically positioned brass cylinders, one within the other and insulated from each other at the top. Two sets of holes at different heights in the outer cylinder allow water to enter (through the lower holes) the space between the cylinders and thus close the circuit. Most of the air in the cavity between the cylinders is forced out of the upper holes; however, some air is trapped above the upper holes thus preventing water from forming a film across the insulation between the tops of the cylinders. The tape capacity of the recorder is sufficient for recording twelve 10-min periods at a tape speed of 1.5 mm/sec. The electric power from the battery is sufficient for recording sixteen 15-m-long tape reels. Orig. art. has: 2 figures and 1 table. [WA-N04]

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: 002/

Card 2/2

SHEYKUN, I.V.

Determining ground temperature at the depth of the zero curtain.  
Mat. k uch. o merz. zon. zem. kory no.9:195-210 '63 (MIRA 18:1)

POKHAYEV, G.V., kand.tekhn.nauk; FEDOROVICH, D.I.; SHEYKIN, I.V.;  
DUKHIN, I.I.; SHCHELOKOV, V.K.; SHUR, Yu.L.; FEL'DMAN, G.M.;  
FILIPPOVSKIY, S.M.;

[Thermal physics of freezing and thawing soils] Teplofizika  
promerzaiushchikh i protaivaiushchikh gruntov. Moskva, Nauka,  
1964. 195 p. (MIRA 17:8)

1. Moscow. Institut merzlotovedeniya.

BOGOMOLOV, N.I., starshiy nauchnyy sotrudnik; CHERKIN, M.I., starshiy nauchnyy sotrudnik.

Practice of spinning flax reving on short staple equipment.  
Tekst.prom. 17 no.6:59-60 Je '57. (MLRA 10:7)

1. TSentral'nyy nauchno-issledovatel'skiy institut l'nyanogo volokna.  
(Flax) (Spinning machinery)

*576 1340/44*  
SHEYKIN, M.I., kand.tekhn.nauk; BARANOVA, Ye.P.

Spinning flax combines. Tekst.prom. 17 no.12:19-22 D '57.

(Flax) (Combing machines)

(MIRA 11:1)



ACC NR: AT6003864

SOURCE CODE: UR/2865/65/004/000/0308/0315

AUTHOR: Bogina, I. D.; Rokotova, N. A.; Rogovenko, Ye. S.; Sheykin, R. L. 32

ORG: none 201

TITLE: Effect of partial limitation of motor activities on basic physiological processes in monkeys 32

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 308-315

TOPIC TAGS: respiration, brain, animal physiology, experiment-animal, space flight simulation, space physiology, weightlessness, physiologic parameter

ABSTRACT: Experiments with partial restraint of monkeys have been performed during the last two years because under weightless conditions partial restraint of humans and animals has become the standard form of existence during spaceflight. In the authors' laboratories, a restraint system designed by Sheykin, which consists of a restraining collar, a belt, and either a seat (for the macaque monkey) or a foot rest (for the capuchin monkeys), was used. 1000

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The first series of experiments was performed on four monkeys for the purpose of determining the effects of prolonged, partial restraint of motor activity on the circadian rhythm of behavior, on the appetite, and the orienting reflex. The monkeys showed an insignificant diminution in the duration of sleep and a depression of the orienting reflex only during the first two to four days after the beginning of the experiment. Their appetite remained good during the entire period of restraint (10 days to 4 months). Daily medical examinations failed to reveal any pathological results of prolonged restraint. After the monkeys were freed from restraint they experienced a certain difficulty in walking. When sitting on a shelf they tried to assume the pose in which they had been restrained. After prolonged restraint (4 months) there was a certain loss of spatial orientation, which manifested itself in the inability of the monkeys to estimate distances properly when jumping. However, all these consequences of restraint disappeared after 2—3 hours. Tests showed that there was no change in sexual drives as a result of prolonged restraint.

The purpose of the second series of experiments was to study diurnal variations in respiratory rhythm, cardiac activity, and bioelectrical activity of the brain of restrained monkeys. Experiments were performed on two capuchin and one macaque monkey. Special features were added to

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Sheykin's restraint system for recording respiration, motor activity, EKG, and EEG. Data from the experiments indicated that changes in the frequency of respiration, in general, were related to motor activities of the monkeys. Respiration in monkeys fluctuated between 32 and 47 cycles per min. Frequency of respiration tended to diminish during the night hours when the monkeys slept. Data obtained two weeks after the beginning of the experiment did not vary much from results obtained during the first three days. Pulse frequency in the macaque monkey ranged from 120 to 160 cps, and in the capuchin from 200 to 250 cps. External stimulation (a rhythmic flashing light) caused the pulse to rise somewhat; in the macaques, for example, it went up to 200 cps. During the course of the experiment the pulse rate tended to remain steady. Restrained macaque monkeys at rest tended to exhibit an alpha-like rhythm with a frequency of 8-12 cps and an average amplitude of 90-95 $\mu$ V. Light stimulation of the eyes caused a distinct inhibition of this rhythm. Capuchin monkeys show a characteristic delta-like rhythm with a frequency of 25-35 cps and an average amplitude of 70 $\mu$ V. The bioelectrical activity of the brain of the monkeys did not show any variations during the period of their restraint. The data obtained in these experiments indicate that under conditions of partial restraint, the respiration, heart beat, and bioelectrical activity of the brain remain within normal limits for the duration of the period of restraint. A comparison of the results of these experiments with those found in the literature

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indicates that prolonged restraint has certain advantages over comparatively short-term restraint. The relative stability of physiological indices obtained during prolonged restraint indicates that animals in limited-restraint systems could be used as subjects in space-flight experiments. Orig. art. has: 3 figures. [ATD PRESS: 4091-F]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 004 / OTH REF: 003

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4/4 W.R.